

Module Title : Course AN300MY : Power Systems for AIX - Virtualization I: Implementing Virtualization

Duration : 5 days

Course Overview

This course provides an overview of the PowerVM edition's features on POWER6 and POWER7 processor-based systems. It explains the new features and benefits of virtualization including processor virtualization, Integrated Virtual Ethernet, Virtual I/O Server, and virtual devices, such as virtual Ethernet, virtual SCSI, and virtual Fibre Channel adapters. Basic and advanced configurations of the Virtual I/O Server and its clients are discussed including various availability options.

Students are also given additional details about PowerVM features that were introduced in *Power Systems for AIX I: LPAR Configuration and Planning* ([AN11MY](#)).

Audience

This intermediate course is intended for system administrators, technical support personnel, and business partners responsible for implementing LPARs on IBM Power Systems servers.

Pre-requisites

You must have advanced system administration experience with AIX 6 **or** AIX 7. This prerequisite can be met by attending one of the following courses:

- Power Systems for AIX II: Implementation and Administration ([AN12MY](#))
- Power Systems for AIX III: Advanced Administration and Problem Determination ([AN15MY](#))
- AIX Jumpstart for UNIX Professionals ([AN14MY](#))

Alternatively, you must have equivalent AIX **and** LPAR skills.

General TCP/IP knowledge is strongly recommended. This prerequisite can be met by attending TCP/IP for AIX Administrators ([AN21MY](#)).

You are also expected to have logical partition administration skills on POWER6 **or** POWER7 processor-based systems, which can be obtained by attending Power Systems for AIX I: LPAR Configuration and Planning ([AN11MY](#)).

Objective

- Discuss the advantages or value of PowerVM edition's features
- Define micro-partitioning and shared processor LPARs
- Discuss the benefits of simultaneous multithreading
- Discuss and configure the Integrated Virtual Ethernet (IVE)
- Install and configure the Virtual I/O Server
- Configure virtual network devices, such as virtual Ethernet and shared Ethernet adapters
- Configure virtual SCSI and virtual Fibre Channel storage adapters

- Configure virtual SCSI target devices on a virtual SCSI adapter
- Define file-backed storage pools and file-backed virtual optical devices
- Identify single points of failure in virtualized environments
- Configure multiple VIO servers for high availability
- Configure advanced virtual networking options
- Configure the shared Ethernet adapter failover feature
- Configure advanced virtual SCSI options
- Configure MPIO in a VIO server's client partition
- Manage the service events, configure call home, add, exchange FRUs, and discuss FSP failover

Key topics

Day 1

- Welcome
- Unit 1: Introduction to partitioning
- Exercise 1: Power Systems documentation overview
- Unit 2: Processor virtualization
- Exercise 2: Processor virtualization configuration

Day 2

- Unit 3: Integrated Virtual Ethernet
- Exercise 3: Integrated Virtual Ethernet configuration
- Unit 4: Virtual Ethernet
- Exercise 4: Virtual Ethernet adapter configuration
- Unit 5: Virtual I/O Server and virtual devices (Part 1)
- Exercise 5: Virtual I/O Server and client partition configuration (Part 1)

Day 3

- Unit 5: Virtual I/O Server and virtual devices (Part 2)
- Exercise 5: Virtual I/O Server and client partition configuration (Part 2)
- Unit 6: Virtual network configuration with dual VIOS
- Exercise 6: SEA failover setup

Day 4

- Unit 7: Virtual SCSI configurations with dual VIOS
- Exercise 7: Dual VIO server configuration with MPIO in the client partition
- Unit 8: N_Port ID virtualization
- Exercise 8: Virtual Fibre Channel adapter configuration
- Unit 9: Migration from physical to virtual storage

Day 5

- Unit 10: HMC Service Management
- Exercise 9: Manage service events
- Unit 11: PowerVM advanced systems maintenance
- Exercise 10: PowerVM system maintenance
- Exercise 11: (Optional) File-backed virtual disk and virtual media repository configuration
- Wrap up and evaluations